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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,103	11/29/2000	William F. Foote	SUNIP263/P4459	6819

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EXAMINER

ANYA, CHARLES E

ART UNIT	PAPER NUMBER
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2126

13

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/727,103

Applicant(s)

FOOTE ET AL.

Examiner

Charles E Anya

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-24 are pending on the instant application.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-7,9-15 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 2003/0069922 A1 to Arunachalam in view of Transparent Forwarding: First Steps (pages 331-341) to McCullough.**

4. As to claim 1, Arunachalam teaches method for executing a remote method, the method comprising: wrapping each argument of the remote method when each argument is determined to be a remote object, copying each argument of the remote method when each argument is determined not to be remote object, invoking the remote method using each wrapped or copied argument (page 10 paragraph 0111, page 12 paragraph 0151, page 15 paragraph 0231, page 16 paragraphs 0234 and 0235), and copying the result of the remote method when the result is determined not to be a remote object (page 12 paragraph 0152, page 13 paragraph 0169, page 16 paragraphs 0244 and 0245 and page 16 paragraph 0256 and 0257).

5. Arunachalam is silent with reference to determining whether each argument of a remote method is a remote object and determining whether a result of the invoked remote method is a remote object wrapping the result of the invoked remote method when the result is determined to be a remote object.

6. McCullough teaches determining whether each argument of a remote method is a remote object and determining whether a result of the invoked remote method is a remote object wrapping the result of the invoked remote method when the result is determined to be a remote object (The PolicyMaker page 334 Section 5.2, pages 336 - 338 section 5.6 – 6.1).

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of McCullough and Arunachalam because the teaching of McCullough would improve the system of Arunachalam by keeping track of open connections between machines (page 334 section 5.2).

8. As to claim 2, Arunachalam teaches a method as recited in claim 1, wherein the argument or result is a remote object when its declared class implements a remote marker interface (page 10 paragraph 0111).

9. As to claim 3, Arunachalam teaches a method as recited in claim 11, wherein the result is only wrapped or copied when an invocation thread associated with invoking the remote method is not being terminated, the method further comprising throwing an exception on the remote method when the invocation thread is terminated (page 10

paragraph 0113, page 11 paragraphs 0132 and 0133, page 17 paragraphs 0301 and 0302).

10. As to claim 4, Arunachalam teaches method as recited in claim 3, wherein wrapping each argument and result includes: creating a wrapper object for the argument or the result and remembering an association between the wrapper object and the argument or the result when a wrapper object has not already been created, and finding the wrapper object for the argument or the result based on a previous association between the argument or the result and the wrapper object when the wrapper object has already been created (page 11 paragraph 0135).

11. As to claim 5, Arunachalam teaches a method as recited in claim 4, wherein creating the wrapper object for each argument and the result includes: finding or generating a remote stub class, creating an instantiation of the remote stub class and setting a data member within the remote stub class to refer to the argument or the result (page 12 paragraph 0151, page 13 paragraph 0168, page 16 paragraph 0242 – 0245).

12. As to claim 6, Arunachalam teaches a method as recited in claim 5, wherein generating the remote stub class includes: generating a class name, adding a method implementation for each method of a class of the argument or result being wrapped into a class definition array, and remembering an association between the class and the

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remote stub class (page 16 paragraphs 0252 and 0253). Also see the rejection of claim 1.

13. As to claim 7, Arunachalam teaches a method as recited in claim 6, wherein finding the remote stub class is based on a previously remembered association between a class and the remote stub class (page 15 paragraph 0232, page 16 paragraph 0233 – 0246).

14. As to claims 9 and 17, see the rejection of claim 1.

15. As to claims 10 and 18, see the rejection of claim 2.

16. As to claims 11 and 19, see the rejection of claim 3

17. As to claims 12 and 20, see the rejection of claim 4.

18. As to claims 13 and 21, see the rejection of claim 5.

19. As to claims 14 and 22, see the rejection of claim 6.

20. As to claims 15 and 23, see the rejection of claim 7.

21. Claims 8,16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 2003/0069922 A1 to Arunachalam in view of Transparent Forwarding: First Steps (pages 331–341) to McCullough as applied to claim 1 above, and further in view of Implementing Multiple Protection Domains in Java (pages 1–15) to Hawblitzel et al.

22. As to claim 8, Arunachalam teaches a method as recited in claim 1, wherein copying each argument and the result includes: serializing each argument or the result into a byte array when the each argument or the result implements serialization (page 11 paragraphs 0130 and 0131, page 16 paragraphs 0246 and 0247).

23. Arunachalam is silent with reference to de-serializing the each argument or the result with respect to a target class loader associated with code that will use the copy of each argument or the result when the each argument or the result implements serialization and implementing a failure process when the each argument or the result does not implement serialization.

24. McCullough teaches and implementing a failure process when the each argument or the result does not implement serialization (page 335 section 5.3).

25. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of McCullough and Arunachalam because the teaching of McCullough would improve the system of Arunachalam by avoiding primitive failure (page 335 section 5.3).

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26. Hawblitzel teaches de-serializing the each argument or the result with respect to a target class loader associated with code that will use the copy of each argument or the result when the each argument or the result implements serialization (page 8 lines 16–24).

27. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Hawblitzel because the teaching of Hawblitzel would improve the system of Arunachalam by providing a fast copy mechanism (page 8 lines 16–24).

28. As to claims 16 and 24, see the rejection of claim 8.

Response to Arguments

29. Applicant's arguments with respect to claims 1 – 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 5,2241,673 to Schelvis

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E Anya whose telephone number is (703) 305-3411. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner
Art Unit 2126

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